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BEFORE THE BOARD OF PATENT APPEALS

AND INTERFERENCES

Paper No. 33

Application Number: 08/800,574

Filing Date: February 18, 1997

Appellant(s): Riffee

Thomas R. FitzGerald

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 30, 2003.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is deficient because at three lines from the bottom of page 3 of the brief, the appellant states that "Claim 9 is a second independent claim; claims 10-28 depend ultimately from claim 9.". The correct statement should be "Claim 19 is a second independent claim; claims 20-28 depend ultimately from claim 19." Further, the statement at four lines from the bottom of page 3 of the brief indicating "claims 2-8 depend utimately from claim 1" should be "claims 2-18 depend utimately from claim 1" instead. The summary of the invention would have otherwise been correct if not for the minor typos made by the appellant. And since these typos have been clarified as discussed in the above, the summary of the invention is no longer deficient.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-18 stand or fall together and claims 19-30 stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

5,389,965	KUZMA	2-1995
6,002,720	YURT et al	12-1999
5,119,375	PANETH et al	6-1992

5,577,190	PETERS	11-1996
5,784,572	ROSTOKER et al	7-1998
5,583,912	SCHILLACI et al	12-1996

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6, and 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma of record (5,389,965) in view of Yurt et al (6,002,720) and Paneth et al of record (5,119,375).

Kuzma discloses a video telephone station having variable image clarity as shown in Figures 1 and 5, and substantially the same narrowband video codec as claimed in claims 1-6 and 9-18 for generating an output stream of control, data, and error correction bits, the video codec comprising substantially the same means for framing the output control and data bits into a series of sequential frames of bytes wherein each frame comprises an identical sequence of bytes, each frame comprising, in sequence two control bytes, a plurality of sequential sets of data bytes, each set of data bytes comprising a sequence of at least one audio byte, and a plurality of error correction bytes (see Figure 4 and columns 5-7); the control bytes include data bit signals representative of the number of bytes in the frame (see Figure 4 and columns 5-7); means for periodically refreshing the decompressed video image (see Figure 2); and means for controlling the level of error correction without re-transmitting corrupted data (see columns 5-7).

Kuzma does not particularly disclose, though, the followings:

(a) the frame including for each set of data bytes comprising a sequence of at least one audio byte and a plurality of video bytes, at least one of the plurality of video bytes between each sequential audio byte, each set of data bytes having its audio and video bytes in the same order as each other set of data bytes, each set of data bytes has the same number of video bytes between sequential audio bytes as claimed in claims 1 and 2;

(b) the transmission of the series of sequential frames of bytes over an rf frequency, and wherein the frames are synchronized to the data rate of the rf link as claimed in claims 1 and 6; and

(c) each frame comprises 200 bytes, 180 data bytes and 18 error correction bytes; each frame comprises 150 video bytes and 30 audio bytes; wherein each sequential audio bytes are separated from each other by five, eleven, or two video bytes; wherein each frame comprises 165 video bytes and 15 audio bytes; wherein each frame comprises 40 bytes, 18 data bytes, and 20 error correction bytes; wherein each frame comprises 12 video bytes and 6 audio bytes; wherein each frame comprises 15 video bytes and 3 audio bytes as claimed in claims 9-18.

Regarding (a), Yurt et al discloses an audio and video transmission and receiving system as shown in Figures 1 and 8, and teaches the conventional framing (see Figures 8c, 8d) of the output data bits comprising a sequence of at least one audio byte and a plurality of video bytes, at least one of the plurality of video bytes between each sequential audio byte, each set of data bytes having its audio and video bytes in the same order as each other set of data bytes, and wherein each set of data bytes has the same number of video bytes between sequential audio bytes (i.e., by framing of audio and video data as shown in Figure 8d based on the realignment of audio and video data and user addressing of the data, this thereby provides the plurality of

video bytes between each sequential audio byte and wherein each set of data bytes has the same number of video bytes between sequential audio bytes, see column 7, line 60 to column 14, column 18, line 46 to column 19, line 12). Therefore, it would have been obvious to one of ordinary skill in the art, having the Kuzma, Yurt et al, and Paneth et al references in front of him/her and the general knowledge of framing data bits, would have had no difficulty in providing the audio and video bytes within a frame as the specific type of framing structure within the video codec of Kuzma for the same well known purposes as claimed.

Regarding (b), Paneth et al discloses a subscriber RF telephone system as shown in Figure 2, and teaches the conventional RF transmission of video data to/from stations (see column 1, lines 29-39) as well as the synchronization of frames (i.e., as provided by Yurt et al, see column 7, lines 14-21 and Figure 8 of Yurt et al) to the data rate of the rf link of Paneth et al (see column 10, lines 36-41 of Paneth et al). Therefore, it would have been obvious to one of ordinary skill in the art, having the Kuzma, Yurt et al, and Paneth et al references in front of him/her and the general knowledge of RF transmission, would have had no difficulty in providing the RF transmission of video data as well as the synchronization of frames for transmission over the rf link as taught by Paneth et al and Yurt et al for the video telephone system of Kuzma for the same well known transmission purposes as claimed.

Regarding (c), it is noted that even without specific disclosure by Kuzma concerning the number of bytes for each frame, data, and error correction, and the separation of sequential audio bytes, it is considered obvious that such values for the number of bytes and the separation of sequential audio bytes by a certain number of video bytes as claimed may obviously be provided by one of ordinary skill in the art. Without specific criticality of such byte values and the number of video bytes to be provided to separate the audio bytes, such limitations are being considered met or provided by one skilled in the art in the particular

processing of the audio and video bytes within the packet transmission of the video telephone of Kuzma. Therefore, it would have been obvious to one of ordinary skill in the art, having the Kuzma, Yurt et al, and Paneth et al references in front of him/her and the general knowledge of the allocation of audio and video bytes, would have had no difficulty in providing any desired number of video and audio bytes with any number of video bytes to separate the audio bytes in the processing of data for the video telephone system of Kuzma for the same well known purposes as claimed.

3. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kuzma, Yurt et al, and Paneth et al as applied to claims 1-6 and 9-18 in the above paragraph (2), and further in view of Schillaci et al of record (5,583,912).

The combination of Kuzma, Yurt et al, and Paneth et al show substantially the same narrowband video codec as above, but does not particularly disclose a battery power supply with power supply voltage between 18 and 36 volts as claimed in claims 7 and 8. However, Schillaci et al discloses a wireless wireline communication selection mechanism resident in craftsperson's portable test and communications device as shown in Figures 1 and 2, and teaches the conventional use of a battery power supply for the communications system (see column 2 and Figure 2). Therefore, it would have been obvious to one of ordinary skill in the art, having the Kuzma, Yurt et al, Paneth et al, and Schillaci et al references in front of him/her, would have had no difficulty in providing the battery power supply as taught by Schillaci et al with any desired power supply voltage including between the 18-36 volts as claimed for the video telephone system of Kuzma for the same well known purposes as claimed.

4. Claims 19, 20, and 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma in view of Peters of record (5,577,190) and Rostoker et al of record (5,784,572).

Kuzma discloses substantially the same narrowband video codec for transmitting and receiving compressed video and audio data signals as claimed in claims 19, 20, and 23-30, comprising a first digital signal processor for converting analog video signals into digital video signals and for compressing the digital video signals into video bytes (i.e., within 500 of Figure 2 and see column 5, lines 1-42); a second digital signal processor for decompressing received digital video bytes into digital video signals and for converting the decompressed digital video signals into analog video signals (i.e., within 500 of Figure 2 and see columns 5, lines 1-42); a third digital signal processor for converting analog audio signals into digital audio signals, for compressing the digital audio signals into audio bytes, for decompressing received audio bytes into digital audio signals, and for converting the decompressed digital audio signals into analog audio signals (i.e., 185 of Figure 2 and see columns 5, lines 1-23); means for periodically refreshing the transmitted video signals in thirty seconds (see Figure 2 of Kuzma); means for running multiple compression and decompression algorithms on all three digital signal processors (see columns 5-7 of Kuzma); means for randomizing data in order to maximize the efficiency of data transmission and means for de-randomizing data without introducing additional bit errors (see column 6, lines 9-37 of Kuzma); and means for selecting one of a plurality of video resolution and clarity modes wherein the video resolution modes include a low and high resolution mode and the video clarity modes include a low, intermediate, and high clarity mode (see column 6 of Kuzma).

Kuzma does not particularly disclose, though, the followings

(a) a solid state memory and means for emulating a disk access system of a computer using solid state memory components to store filed sequences with compression/decompression algorithm data as claimed in claims 19 and 29;

(b) transmitting and receiving compressed video and audio data signals over a rf link as claimed in claims 19 and 29; and

(c) a memory for storing a program connected to at least the third digital signal processor, the memory comprising at least two audio conversion programs for converting audio at first and second respective rates, and means for automatically selecting one of the audio conversion programs in accordance with the data rate of the rf link as claimed in claims 29 and 30.

Regarding (a), Peters discloses a media editing system with adjustable source material compression as shown in Figure 1 and 9, and teaches the conventional use of a solid state memory and means for emulating a disk access system of a computer using solid state memory components to store filed sequences with compression/decompression algorithm data (see Figures 8 and 9, and columns 14-15). Therefore, it would have been obvious to one of ordinary skill in the art, having the Kuzma and Peters references in front of him/her and the general knowledge of memory storage means within video encoders/decoders, would have had no difficulty in providing the solid state memory and disk access system as shown in Peters for the video telephone system of Kuzma for the same well known storage purposes as claimed.

Regarding (b) and (c), Rostoker et al discloses a method and apparatus for compressing video and voice signals according to different standards as shown in Figure 1, and teaches the conventional RF transmission/reception of video and audio data (see Abstract, column 1, column 3, lines 50-58) and a

memory (i.e., ROM 30 of Figure 1, and see column 3, line 15 to column 4, line 36) for storing a program connected to at least the audio digital signal processor, the memory comprising at least two audio conversion programs for converting audio at first and second respective rates. In addition, though Rostoker et al teaches the manual selection of audio rates in accordance with the data rate of the rf link (see column 3, lines 37-58, column 4, lines 1-12), it is not invention to provide the automatic selection of one of the audio conversion programs as claimed (see In re Venner, 20 USPQ 192 (CCPA 1958)). Therefore, it would have been obvious to one of ordinary skill in the art, having the Kuzma and Rostoker et al references in front of him/her and the general knowledge of RF transmissions, would have had no difficulty in providing the RF transmission/reception of video data, the synchronization of frames for transmission over the rf link, a memory for storing a program connected to at least the audio digital signal processor, the memory comprising at least two audio conversion programs for converting audio at first and second respective rates, and means for automatically selecting one of the audio conversion programs in accordance with the data rate of the rf link as taught by Rostoker al for the video telephone system of Kuzma for the same well known transmission purposes as claimed.

5. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kuzma, Peters, and Rostoker et al as applied to claims 19, 20, and 23-30 in the above paragraph (4), and further in view of Schillaci et al of record (5,583,912).

The combination of Kuzma, Peters, and Rostoker et al disclose substantially the same narrowband video codec for transmitting and receiving compressed video and audio data signals as above, but does not particularly disclose a battery power supply with power supply voltage between 18 and 36 volts as claimed in claims 21 and 22. However, Schillaci et al discloses a wireless wireline communication selection mechanism

resident in craftsperson's portable test and communications device as shown in Figures 1 and 2, and teaches the conventional use of a battery power supply for the communications system (see column 2 and Figure 2). Therefore, it would have been obvious to one of ordinary skill in the art, having the Kuzma, Peters, Rostoker et al, and Schillaci et al references in front of him/her, would have had no difficulty in providing the battery power supply as taught by Schillaci et al with any desired power supply voltage including between the 18-36 volts as claimed for the video telephone system of Kuzma for the same well known purposes as claimed.

(11) Response to Argument

It is noted that the appellant's statements that "Claims 1-18 are rejected under 35 USC 103(a) as being unpatentable over Kuzma (US 5389965) in view of Yurt et al (US 6002720) and Paneth et al (US 5119375)" and "Claims 19-30 are rejected under 35 USC 103(a) are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma in view of Peters of record (5,577,190) and Rostoker et al of record (5,784,572)" as shown at page 5 under the Argument section of the Brief filed May 30, 2003 are in error. The correct statements should be as follows. Claims 1-6, and 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma of record (5,389,965) in view of Yurt et al (6,002,720) and Paneth et al of record (5,119,375). Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kuzma, Yurt et al, and Paneth et al as applied to claims 1-6 and 9-18, and further in view of Schillaci et al of record (5,583,912). Claims 19, 20, and 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma in view of Peters of record (5,577,190) and Rostoker et al of record (5,784,572). Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kuzma, Peters, and Rostoker et al as applied to claims 19, 20, and 23-30, and further in view of Schillaci et al of record (5,583,912).

Another error noted is on page 6 of the Brief filed May 30, 2003. The statement heading "Claims 1-19 are patentable". should be "Claims 1-18 are patentable" instead to agree with the grouping of the claims as presented at page 5 of the Brief.

On pages 5-6 of the Brief filed May 30, 2003, the appellant argues that the "frames" identified in the rejection are hypothetical constructs made by the Examiner, that inherent protocol requirements for transmitting data preclude the hypothetical frames from any practical application in a data communication system, items 1, 2, and 3 of Figure 8d of Yurt as hypothetical frames are unsupported by and contrary to the reference which clearly identifies elements 812, 832 and 822 as frames, and no one frame contains both audio and video bytes. It is noted that the Specification teaches, as similarly indicated by the appellant at page 2 of the Brief, that "the codec **frames** the stream of bits into a series of sequential **frames** of bytes for transmission over an rf link of a controlled frequency", and "Each frame comprises an identical sequence of bytes and includes, in sequence, two control bytes, a plurality of sequential sets of data bytes and a plurality of error correction bytes. The data bytes include repeated sets of audio and video bytes." (see page 1, line 34 to page 2, line 11 of the Specification). The meaning of the terms "frame" and "means for framing" as disclosed and claimed are therefore different from what is commonly known as a picture of video data. In view of the teachings in the Specification, the terms "frame" and "means for framing" are defined as nothing more than grouping some combination of data together, such as the audio and video as claimed. As such, it is submitted that the items 1, 2, and 3 of Figure 8d of Yurt may each be considered substantially the same if not the same "means for framing" as claimed. In other words, items 1, 2, or 3 of Figure 8d of Yurt may each be considered a frame. Item 2 for example provides substantially the same if not the same framing of audio and video data thereby providing a plurality of video bytes (i.e. V of Figure 8d) between each sequential

audio byte (i.e., A of Figure 8d) and wherein each set of data bytes has the same number of video bytes between sequential audio bytes. Further, the data frame "D" as shown, for example, in item 2 of Figure 8d for providing frames of video data and audio data (see column 7, lines 60-64, column may 18, lines 55-57) may be considered the "frame" as claimed comprising plurality of sequential sets of data bytes, where each set of the data bytes comprises a sequence of at least one of the plurality of video bytes between each sequential audio byte. The Examiner therefore disagrees with the appellant that the frame of Yurt does not contain both audio and video bytes. The Examiner does however agree with the appellant that some sort of inherent protocol requirement must be provided for the transmission of the data, but the Examiner disagrees with the appellant that the protocol requirements for transmitting data preclude the frames of Yurt from any practical application in a data communication system. Both the present invention and Yurt et al deal with audio and video transmission and receiving systems, and Yurt et al also teaches that protocol requirements are provided (see column 4, lines 54-59) for the transmission and reception of audio/video data which includes the framing of data as shown in Figure 8d, along with other associated data.

On pages 6-7 of the Brief filed May 30, 2003, the appellant argues that even with the inherent control and error correction bytes within Yurt, the hypothetical frame of Yurt does not show or suggest the claimed sequence of bytes. The Examiner however disagrees for reasons in the above paragraph.

On page 7 of the Brief filed May 30, 2003, the appellant supports the assertion that all data communication systems have control and error correction features citing the reference Understanding Data Communications by Griend et al (Exhibit A). The reference is acknowledged by the Examiner.

The appellant's explanation of the term "codec" with the aid of Exhibit B and the particular referencing of Motorola's product library with the indicated website for DSP data (Exhibit C) as provided on pages 7-8 of the Brief filed May 30, 2003 are noted by the Examiner.

On pages 8-9 of the Brief filed May 30, 2003, the appellant argues in general that the rejection with the Kuzma reference erroneously found that the reference inherently has three DSPs, and Kuzma does not use two DSPs (or two codecs) to separately transmit and receive video and nor does it use one DSP to transmit and receive audio. It is however again submitted that as disclosed at column 4, lines 50-57, column 5, column 9, lines 7-35, of Kuzma, analog video signals derived from camera 110 are presented to codec 500 for digital video compression. And in order for the video coder within the video codec 500 to perform such digital video compression involving motion compensation, interframe and interframe codings (see Figure 5), the video coder of Kuzma must inherently include a DSP for converting the analog video signals into digital video signals and for compressing the digital video signals into video bytes in order to carry out the digital video codings. Also, since Kuzma teaches the particular decoding of the received video signal within the video codec 500 (see column 5, lines 6-27), a DSP is inherently included within the video decoder of the video codec for decompressing received digital video signals into analog video signals (i.e., as provided for video display 130, see column 5, lines 6-27). Further, a DSP must inherently be provided within audio codec 185 of Kuzma since the audio codec provides conversion of analog audio signals into digital audio signals, for compressing the digital audio signals into audio bytes, for decompressing received audio bytes into digital audio signals, and for converting the decompressed digital audio signals into analog audio signals (see column 5, lines 28-42).

On page 9 of the Brief filed May 30, 2003, the appellant states that key word searches have been performed on the USPTO web site looking for the terms "codec" and "DSP" and "digital signal processor" in patents, with the results showing about 1773 patents with the terms codec and DSP, 6382 patents with the terms "codec", and over 23,000 patents with the terms "DSP" or "digital signal processor". The appellant had concluded that such searches though not conclusive, do however provide strong evidence that those skilled in the art would recognize that DSPs are different from codecs. The Examiner does not particularly understand the rationale behind the searches performed and for that matter the concluding comments by the appellant as a result of such searches. On the one hand the appellant indicates that such searches are not conclusive and on the other hand states that the search results provides strong evidence that those skilled in the art recognize that DSPs are different from codecs. With such an abundant number of hits for the terms "codec" and "DSP", it would seem to otherwise suggest the conventional, commercially available, and common use of such hardware components together, and for that matter the inherent use of DSP within the video and audio decoders of Kuzma thereby rendering obvious the claimed invention. The searches performed by the appellant nevertheless are noted.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

RICHARD LEE

PRIMARY EXAMINER

Richard Lee/rl

September 5, 2003

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